

ABSTRACT

5           An absorbent paper sheet is treated with an aqueous wax dispersion such that  
the sheet includes a fused wax and emulsifier residue in an amount of from about 1 to  
about 20 weight percent of the sheet based on the combined weight of the fiber, wax  
residue and an emulsifier residue in the sheet. The fused wax emulsion operates to  
10   make at least one surface of the sheet laterally hydrophobic, exhibiting a moisture  
penetration delay of at least about 2 seconds and less than about 40 seconds as well  
as a typical contact angle with water at one minute of at least about 50 degrees. There  
is thus provided absorbent products which exhibit both absorbency and resistance to  
moisture penetration. The treated sheet further exhibits microbial barrier properties,  
impeding transfer of bacteria, for example, through the sheet. There are produced  
15   tissue products which resist moisture penetration from propelled liquids as well as  
sequester sorbed liquids in the interior of the tissue.